wireless RERC

Rehabilitation Engineering Research Center for
Wireless Technologies

VIA ECFS

February 4, 2008

Marlene H. Dortch, Secretary
Office of the Secretary
Federal Communications Commission
445 12th Street, S.W.
TW-A325
Washington D.C. 20554

Re: *In the Matter of The Commercial Mobile Alert System, PS Docket 07-287*

Dear Ms. Dortch:

Enclosed for filing in the above referenced Notice of Proposed Rulemaking are comments of the Rehabilitation Engineering Research Center for Wireless Technologies (Wireless RERC).

Should you have any questions concerning this filing, please do not hesitate to contact me via phone (404-385-4640) or e-mail (helena.mitchell@cacp.gatech.edu).

Respectfully submitted,

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(Wireless RERC)
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Enclosure

Before the
Federal Communications Commission
Washington, D.C. 20554

In the Matter of	)	
	)	
The Commercial Mobile Alert System	)	PS Docket No. 07-287

COMMENTS OF
REHABILITATION ENGINEERING RESEARCH CENTER FOR
WIRELESS TECHNOLOGIES (WIRELESS RERC)

The Rehabilitation Engineering Research Center for Wireless Technologies (Wireless RERC), hereby submits comments to *The Commercial Mobile Alert System Notice of Proposed Rulemaking,* PS Docket No. 07-287 released on December 14, 2007 regarding specific issues identified in the above-referenced proceeding.

The Wireless RERC[1] is a research center focused on promoting equitable access to and use of wireless technologies by people with disabilities and on encouraging the application of Universal Design practices in future generations of wireless technologies. The Wireless RERC focuses its comments on the

[1] The Rehabilitation Engineering Research Center for Wireless Technologies (Wireless RERC) is sponsored by the National Institute on Disability and Rehabilitation Research (NIDRR) of the U.S. Department of Education under grant number H133E060061. The opinions contained in this paper are those of the authors and do not necessarily reflect those of the U.S. Department of Education or NIDRR.

Notice of Proposed Rulemaking to ensure that the Commercial Mobile Alert System (CMAS) and related emergency information are accessible to persons with disabilities.

NOTICE OF PROPOSED RULEMAKING

The Rehabilitation Engineering Research Center for Wireless Technologies (Wireless RERC) applauds the Commission for the Notice of Proposed Rulemaking (NPRM) to develop a Commercial Mobile Alert System (CMAS) and the volunteer work of the Commercial Mobile Alert Advisory Committee (CMSAAC) in developing a set of recommendations for CMAS. The Wireless RERC is very concerned about how promptly commercial mobile service (CMS) providers will begin transmitting alerts to the public and especially to persons with disabilities. Some 60% of the U.S. population use wireless services, which accounts for more than 253 million subscribers, thus access to these services in a timely manner has become vital to full participation in society (CTIA Semi-Annual Wireless Industry Survey, 2006).

As wireless devices increasingly become primary sources of communications, receiving alerts on these devices need to be considered in any emergency communications scenario. The Wireless RERC's Survey of User Needs revealed that people with disabilities are significant users and early

adopters of wireless products and services (Mueller et al. 2005). In particular, millions of people with disabilities have cell phones that provide them with information they might otherwise not receive through other mediums. The deaf community has become significant adopters of 2-way text pagers such as the Blackberry. Blind consumers can now purchase cell phones that read SMS messages to them. The FCC, along with other Federal organizations, has made access to the Emergency Alert System (EAS) for persons with disabilities a priority. With increased use of wireless devices by people of all abilities, it is important to ensure these devices are accessible by all users when it comes to receiving emergency alerts.

The Wireless RERC recognizes the efforts of the Commission concerning the Warning Alert and Response Network (WARN) and the President's "Public Alert and Warning System" Executive Order. This NPRM is a solid first step in that regard since it provides a set of standards for cellular carriers to participate in the "Next Generation" Emergency Alert System (EAS). However, it fails to guarantee that the public will be able to receive alerts on their mobile phones, especially alerts at the state and local levels.

For years, FCC regulations have permitted communication industry entities to voluntarily participate in EAS and its predecessor system, the Emergency Broadcast System (EBS). However, very few voluntarily participated. There was a federal program where several major national broadcast networks and cable program suppliers voluntarily participated at the

national level. The program was successful due to the FCC and the Federal Emergency Management Agency (FEMA) committing resources for program implementation, allowing FEMA to fund equipment to connect the network and program supplier facilities to national level alerts. Also, the state of Rhode Island instituted a method to encourage cable companies to participate in EBS. Rhode Island required EBS participation prior to a cable company's receipt of a franchise license to operate in the state. Eventually volunteer participation was replaced by a provision in the Cable Act of 1992 requiring cable companies to provide the same programming as provided by broadcast stations in EBS. Consequently, FCC regulations required cable companies to participate in EAS starting in the late 1990s. We urge that such a delay not be allowed to occur with CMAS.

In view of the above, the Wireless RERC recommends that the Commission: (1) act expeditiously to set standards for CMS providers concerning their voluntary participation in CMAS, (2) embark on a program with FEMA, the National Oceanic and Atmospheric Administration (NOAA), the National Weather Service (NWS), the Department of Justice (DOJ) and the cellular industry to encourage voluntary participation including, but not limited to, providing incentives and liability protection, (3) publish News Releases and daily update the FCC web site with CMAS information that detail the participation level (national, state and local) of CMS providers voluntarily participating, and, (4) absent significant progress in voluntary participation,

seek Congressional authority to mandate participation. However, if the FCC decides not to mandate that CMS providers transmit alerts to their subscribers, the Wireless RERC encourages CMS providers take the initiative and make an alert feature available as soon as possible.

The Wireless RERC respectfully provides the following comments referencing paragraphs provided in the NPRM.

Broadcast distribution model (¶ 10)

The distribution for CMAS and EAS should utilize all available systems. Some of these distribution systems are already in use because they are required of EAS participants to participate. Others should be encouraged to participate voluntarily. Voluntary participants could include the noncommercial educational (NCE) broadcast station networks, national and regional commercial television and radio networks, Radio Broadcast Data System (RBDS), national cable program suppliers, etc.

Federal government's role as an "Alert Aggregator" (¶ 12)

The Wireless RERC recommends that the "Alert Aggregator" role would best be filled by the Federal government because of its ability to more quickly ramp up and role out the system. An excellent example of an "Alert Aggregator" is the NWS web site that displays alerts. NWS compiles alerts

developed by its field offices across the country and presents them in the SAME/EAS and CAP protocols on its web site. A similar web site should be developed by FEMA to capture state and local non-weather alerts.

The Wireless RERC, under our Wireless Emergency Communications (WEC) project, has begun using the NWS web site as a source for weather alerts for our wireless device field tests with people with disabilities. Like Amber Alerts, this is a critical audience to reach during emergencies. The current NWS web site and a FEMA non-weather "aggregate alert" web site would tie in with the functions outlined for officials in the WARN Act Section 602, "any Federal, State, tribal, or local government official with credentials issued by the National Alert Office under section 603 to alert the public to any imminent threat that presents a significant risk of injury or death to the public."

Federal government's role in a centralized system (¶ 13)

A Federal web site supplied with the alerts gathered by FEMA and NWS would best serve CMAS and possibly EAS. We recommend that the web site be maintained and controlled by the Federal government since almost all of the alerts are generated by federal, State and local authorities and by NWS. The Wireless RERC suggests that the Federal government would be in the best position to operate the "Alert Aggregator", especially in national emergency situations. A Federal site would leave little room for challenges based on liability, authority concerns, timeliness and accuracy. Also, the FEMA and

NWS alerts should be available via NCE broadcast stations or public broadcast stations to serve CMAS and EAS participants. It is assumed that such a system is being developed by FEMA under the "Next Generation EAS". With respect to federal authority, it is recommended that the Commission, FEMA, NWS and DOJ begin discussions to establish an aggregator site. Also, the federal agencies should request Congressional authority that would protect CMAS and EAS participants from frivolous lawsuits concerning liability.

Alert formatting (¶ 15)

CMSAAC's recommendation of a 90 character text limit of any CMAS alert seems reasonable. An alert is intended to get the attention of a person. The person can then search other mass media for confirmation of the alert and more information about the emergency.

Alert classifications (¶ 16)

All EAS participants are required to receive and transmit certain national Event Codes as defined by the FCC EAS protocol code in C.F.R. Part 11. NWS SAME codes match the Part 11 codes. Soon EAS participants may be required to receive and transmit additional Event Codes for state and local alerts pending Commission action *In the Matter of Review of the Emergency Alert System in EB Docket No. 04-296*. All other alert codes would remain voluntary. Under CMSAAC's recommendations, CMAS participants would have a different set of criteria. CAP can support both criteria but there could be some confusion for originators of alert messages. Therefore, if different CAP

criteria are used for different services, it is imperative that all authorities who originate emergency messages be thoroughly trained in the CAP protocol. Otherwise alerts will not reach the intended audiences. The fact that CMS providers already support the transmission of Amber Alerts to mobile devices using SMS technology should embolden the Commission to act quickly to implement CMAS. The success of the Wireless RERC WEC project beta field tests where NWS weather alerts are transmitted to wireless devices reinforces expeditious action.

Elements of a CMAM (¶ 18)

The CMSAAC Commercial Mobile Alert Message (CMAM) differs from the standard message format used for many years by NWS in its messages. This may cause confusion for mobile phone subscribers who are used to the NWS format. Consistency in message formats is critical for alerts. Whatever format is adopted, the Wireless RERC recommends that the NWS and CMAM message formats be identical.

Standardized alerting messages (¶ 20)

The phrase, "Do not use the telephone except in case of an emergency", has been around for many years. Yet, overload of communications systems still occur during emergencies. CMS providers know their system capacities and they are responsible for any instructions provided to their subscribers that could overload their facilities. This includes providing telephone numbers, URLs, etc. Instructing the public to tune to their local radio and television

station and other mass media is the best option for obtaining additional emergency information. If standardized alerting messages are adopted, the Wireless RERC recommends including the following language, "If you know of someone who needs to be aware of this alert, please inform them."

Geo-targeting CMAS alerts (¶ 21)

Alerting areas surrounding a disaster location is very useful for persons traveling into the locality, persons who may become part of an expanding disaster, or authorities who need to lend assistance or get ready for evacuations. Currently the National Weather Service issues warning on a county-wide basis. The Wireless RERC WEC project, alerts are capable of being sent to users via their specific zip codes. However, until precise targeting can be accomplished reliably, the Wireless RERC sees little harm in alerts being transmitted to areas larger than the disaster location. Cell Broadcast technology may be able to address this problem going forward after further tests of it are undertaken across the U.S.

CMAS for individuals with disabilities and the elderly (¶ 23)

Statistics estimate there are more than 54 million U.S. residents who have some type of disability (NOD 2007). Not included in this number is approximately 12.4 % of the total population over the age of 65 years (Census 2000), a population that frequently faces many of the limitations of people with disabilities. By 2030 it is estimated that the over 65 population will be more than 20% of the total U.S. population (Day 1996). The Wireless RERC is very

concerned that any alerting systems and services, including commercial mobile service (CMS) providers, begin transmitting alerts to the public and simultaneously to persons with disabilities in accessible formats in the modality they are most used to receiving information. Blind consumers can now purchase cell phones that read SMS messages to them. The deaf and hard-of-hearing population has long been among early adopters of technology. The FCC continues in its rulemaking regarding the Emergency Alert System (EAS) to ensure that access for persons with disabilities remain a priority. The Wireless RERC recommends that the FCC strongly reinforce this goal of inclusiveness and not permit any delays in the accessibility requirements for CMAS messaging.

The Wireless RERC agrees with CMSAAC on a common audio attention signal. The Wireless RERC recommends the existing eight second EAS attention signal as the common audio attention signal for all users. This attention signal is recognizable by the public since it has been used for decades by all EAS participants. Eight seconds is a reasonable amount of time for a person to respond to a message and the minimal amount of time for a hard-of-hearing person. The Wireless RERC recommends a common vibrating cadence. The Wireless RERC recommends that the training of emergency message originators include the use of easily recognizable and clear and simple language whenever possible. Recall of messages is needed for the hard-of-hearing. CMS providers must include clear instructions on the alert capabilities of their

mobile devices. Marketing should include labels identifying mobile devices suitable for persons with audio and visual disabilities. CMS providers should alert those subscribers whose cell phones need upgrading to support CMAS.

CMAS alerts in other languages (¶ 24)

Access to multi-lingual, non-English speaking emergency warnings and information is critical for more than 14 million U.S. households. The Wireless RERC supports efforts that would bring about multi-lingual solutions, especially given the technology is readily available to address this issue. The FCC EAS Handbook states that a non-English speaking station can transmit an emergency alert in the language of the audience the station serves, this should also be true for those sending CMAS alerts. The FCC should strongly encourage providers serving non-English audiences, to procure and install software which will automatically translate English CAP emergency messages into other languages. However, there does still remain some apprehension by the Wireless RERC over the accuracy of translation software. Although it is desirable to have multi-language alerts from the message originator, the Wireless RERC has concerns about this because of the time delay caused by originating alerts in different languages. If most standard coding could be pre-recorded in different languages that might help reduce the time delay. The Wireless RERC suggests the FCC solicit potential solutions regarding the technical application of multi-language alerts in an expedited process.

CMAS election rulemaking (¶ 25)

The Wireless RERC has stated its position on volunteerism at the beginning of our comments. In essence, unless the FCC requires participation, very few entities voluntarily participate. The question of volunteering to elect to transmit or not transmit emergency alerts to the subscribers needs to be revisited so that the system might be effective. The real issue is how long it will take CMS providers to have the capability to alert their subscribers. The Wireless RERC believes the Commission should require CMS providers to have the capability to alert their subscribers, especially for state and local alerts. The subscriber should be allowed to elect whether to receive or not receive alerts.

Point of sale (¶ 27)

The Wireless RERC agrees with the Commission procedures concerning the point of sale including third party retailers. The point of sale should apply to all CMS providers for CMAS. Such point of sale procedures should include audio and visual procedures so that persons with disabilities will be fully informed of CMAS. CMS providers should have copies of their CMAS information in large print, Braille and audio formats for those subscribers with full or partial vision loss.

Constituting clear notice at the point of sale (¶ 28)

Persons subscribing with a CMS provider should have to initial a section in their service agreement indicating that they were provided aural and visual information about the device capabilities concerning CMAS. This is especially important to persons with disabilities, the elderly and for those whom are non-English speakers, who may have aural or visual impairments or may not fully understand CMAS. Without full understanding of CMAS, the subscriber will be at a disadvantage. CMS provider display placards should be in large print.

Disclosure obligations (¶ 29)

The Wireless RERC disagrees with the CMSAAC suggestion about disclosure. The Wireless RERC recommends that CMS providers should be required to instruct subscribers that technical limitations might prevent alert message reception even in areas with signal coverage. These no-alert areas should be detailed in coverage maps.

Notification to existing subscribers (¶ 30)

As explained above, the Wireless RERC recommends that CMS providers should be required to fully inform subscribers about the alert capabilities of their network and their wireless devices including pre-paid devices. Labeling on wireless devices, or at least on the packages of wireless devices, should be available in alternative formats such as large print to aid the visually impaired. The Commission should establish CMAS standards of performance consistent with the Americans with Disabilities Act and other federal regulations regarding providing services to people with disabilities.

CMSAAC timeline (¶ 31)

The Wireless RERC recommends that the Commission establish the CMAS timeline as soon as possible and immediately publish via News Release and the FCC web site the filings of CMS providers. This will provide the public with the necessary information needed for purchasing a wireless device and a network service.

Service providers notification to the FCC (¶ 33)

As explained above, the CMS provider should be required to inform the Commission electronically and in writing within five business days of all of its CMAS (1) capabilities and non-capabilities, (2) national, state and local participation levels, (3) timelines for participation and non-participation, (4) devices that are CMAS ready, and (5) network areas of CMAS service. The Commission should display all of the above CMS provider information prominently on the FCC web site so that consumers have access to the information. The web site should be updated every business day.

CMAS election rulemaking (¶ 34)

Service providers should be required to file withdrawals and all aspects of CMAS capabilities both electronically and in writing with the Commission. This is especially important if the service provider establishes a cost recovery mechanism and then ceases to provide emergency alerts. In which case, the

service provider should be required to certify they are no longer passing through costs to implement emergency alerts to subscribers. This provision would be especially important to people with disabilities and the elderly who might have less disposable resources to support services they no longer receive.

Subscribers terminating service (¶ 35)

The Wireless RERC recommends that any subscriber should be allowed to discontinue service without penalty or early termination fee if their CMS provider; (1) elects not to participate in CMAS, (2) terminates CMAS participation, (3) does not offer compatible CMAS devices or, (4) does not provide CMAS coverage in the county of residence of the subscriber.

Opt-out process (¶ 36)

The CMSAAC recommendation for subscriber opting out of "all messages", "all severe messages", and "Amber alerts", seems reasonable. However, CMS providers should make it clear to the subscriber what opting out means - that they will not, as an example, receive tornado warnings.

Section 602(b)(2)(E) (¶ 37)

Other EAS participants were required to bear the cost of mandated EAS participation. As an example, the cable industry costs for EAS were in the many millions of dollars. CMS providers should not be treated differently with respect to their participation in CMAS. However, since CMAS is starting as a

voluntary system and CMS providers are not allowed to impose a separate or additional charge for such transmission or capability, the Commission should review its mobile services regulations to implement any incentives that might offset CMS expenses and encourage CMS providers to participate in CMAS.

DEAS and NCE (¶ 39)

The Wireless RERC is unaware of any other system except DEAS that can perform the required distribution of CMAS.

Test regime (¶ 41)

In the successful transition from EBS to EAS, the Commission was the lead agency in the development, testing and the FCC EBS field tests conducted between 1991 and 1994. All the agencies that dealt with national and state emergency preparedness, FCC, FEMA, NOAA, and the NWS, went through a series of rulemakings; field-testing in the western states and the eastern states; and held hearings and focus groups to examine the economic, sociological and technological factors that would create a strong working emergency communications system. Stakeholders such as the National Association for the Deaf, Television for All, Telecommunications for the Deaf, Self Help and Hard of Hearing People, and Gallaudet University participated in testing prototype devices. The broadcast industry volunteered personnel and equipment for the

EAS field tests in Denver and Baltimore. A similar effort is needed to insure that CMAS is successful and inclusive of all people including people with disabilities, the elderly and those for which English is a second language.

Relationship between CMAS and EAS (¶ 42)

The Commission should convene a Federal advisory group as soon as possible. It should be composed of the leaders from the EAS community, State Emergency Communications Chairs and the CMS industry. Organizations such as those representing persons with disabilities, emergency management, industry associations, etc. should be included in the advisory membership. The group's task should be to recommend a step by step approach to integrate EAS and CMAS into a "national alert system". The FCC advisory group can operate in the interim period before the establishment of the "National Alert System Working Group" or as an advisor or as a member of the group. The Wireless RERC does recommend that the group be appointed quickly and that its input be incorporated into future rulemakings so as not to lose momentum or exclude any entities that should have a voice in the process to establish a National Alert System.

In closing, the Wireless RERC commends the FCC on its continual efforts to develop CMAS into a comprehensive national network comprised of innovative technologies capable of delivering emergency messages for receipt by the various CMS devices used by both the general public, and more specifically, by people with disabilities.

Respectfully submitted,

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Dated this 31st day of January 2008